PHMC Lessons Learned

Fluor Hanford Inc.

Information Bulletin

This Bulletin is being provided to you for review, analysis, and internalization as applicable.

Title: Respiratory Protection Equipment Recurring Issues

Date: August 18, 2006

Identifier: 2006-RL-HNF-0032

Lessons Learned Summary: Management needs to be constantly vigilant to new trends as work activities and scope changes throughout a facility's life.

Discussion of Activities: Over a twelve (13) month period (August 2005 - September 2006) there were multiple events where respiratory protection equipment failed while in use in the field. The failures included dislodging of the filters or a disconnection of the hose between the facemask and filters. Two primary causes were identified. Approximately 40% failed due to inadequate assembly and verification, and 60% failed due to inadvertent bumping into equipment in the area.

Analysis: The use of respiratory protection equipment under significantly varying conditions has increased due to changes in the work-scope to perform closure activities at Hanford nuclear facilities. Additional procedures, work package instructions, and/or pre-job briefings were developed to ensure personnel were provided the guidance to perform activities safely as the conditions under which they work vary through the life-cycle of the project.

As each respiratory equipment failure event occurred, some form of remedial action was initiated. However, when each event is looked at from a microscopic versus macroscopic view, the new barriers established tend to be weak and only focus in on a small part of potential programmatic issues. This can provide a false sense that things are running smoothly when in fact flawed defenses are being used.

Recommendations:

- Management and workers must be aware of changing conditions and use a questioning attitude about work activities being performed.
- Personnel must have the requisite knowledge and skills to perform assigned tasks under new conditions.
- Training programs should be evaluated to determine if they are maintained current and adequately prepare personnel to perform their assigned tasks. A mechanism to provide feedback on field performance issues into Training program development should be developed.
- Procedures or work instructions should be provided for all non-routine work activities. While activities may appear to be similar, each has a different set of characteristics and hazards which need to be evaluated and effective controls applied to the work.

- Worker performance must be continually evaluated through in-field observation to detect worker behaviors that may contribute to unwanted events. This information should then be communicated appropriately to improve procedures and training.

Cost Savings/Avoidance: NA

Work Function: Conduct of Operations/Procedure Development, Work Planning, Work Control; Decontamination and Decommissioning, Demolition; Management, Occupational Safety and Health, Radiation Protection, Training and Qualifications

Hazards: Personal Injury-Exposure/Radioactive Material

Keywords: Deactivation and Decommissioning (D&D), Procedures, Training, Feedback, Respiratory Protection,

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